

ground. So long as the unit is not in a thickly vegetated area, aviators can effectively find the enemy location. The AN/PAQ-4 is able to paint the line because it is not powerful or precise enough to lase right on the target, as the AIM-1 can do. (A hand-held version of the AIM-1 is available in the supply system; units can purchase it for about \$900 and be able to lase right on the target.)

Identifying friendly positions is important in preventing fratricide. Some techniques for locating by day are grid coordinate, terrain association, or VX-17 panel or smoke. Some techniques for night are grid coordinate, terrain association, and infrared or colored chemlights (other than green or blue, since aviators have difficulty seeing these colors with their NVGs). The pilot must give a positive identification of the friendly position before firing. Many of the problems of fratricide dur-

ing Operation DESERT STORM were a result of failure to positively identify friendly forces.

Once the target is engaged, fire adjustments will help ensure that the rounds are hitting the enemy position. If there is a misunderstanding of the target, a simple adjustment can remedy the situation. Adjustments with attack helicopters are best done using cardinal directions; for instance, if the rounds are striking 100 meters north of the enemy, the correction should be "shift south 100 meters."

The use of attack helicopters is really quite simple for infantrymen, so long as they remember these four tasks. These tasks are deliberately general so that calling for fire is simple yet flexible.

Finally, it is important that infantry units train regularly with aviation units. Infantry units tend to focus inward on making themselves better in their basic infantry tasks, which is good. But in-

fantry units can also make themselves better by incorporating the tremendous firepower assets of attack aviation into their training. Infantry units also must shift their focus from assault aviation to attack aviation.

For light infantry units with limited organic firepower, attack aviation units can be an important force multiplier. In the post-Cold War world, low intensity conflicts are commonplace, and the Army must be prepared to face the challenge they present. One of the best ways to face these challenges is solid coordination between the light infantry and attack aviation.

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# Enhanced Home-Station Gunnery

**MAJOR GARY W. ACE**  
**SERGEANT FIRST CLASS WILLIAM D. LaCOMBE**

Using the Bradley fighting vehicle's (BFV's) integrated sight unit in the thermal mode, a commander and gunner can detect and engage targets during any condition of visibility. To make the most of this advantage, however, thermal target engagements must be emphasized during training.

Home-station gunnery (HSG) for units equipped with the BFV is a conti-

nuing, progressive training program that intensifies two or three months before a major gunnery exercise. HSG focuses on orienting the crewmen to the technical aspects of the vehicle's turret system, exposing them to the most fundamental gunnery techniques, building them into an efficient team before the introduction of full-caliber ammunition, and integrating the platoon into

dry-fire proficiency courses. Training BFV gunners to engage targets in the thermal mode at home station uses training time more efficiently and produces better training.

We propose a low-cost, high-payoff gunnery technique that helps gunners build confidence in using the thermal sight. In this technique, no-power thermal tape is applied to scaled targets to

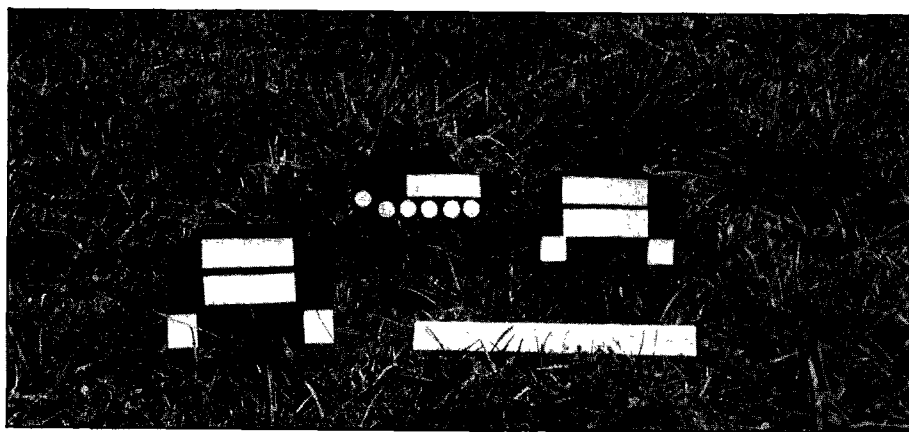
create a realistic thermal vehicle image. With scaled thermal targets, the crew is trained to use the night sight in the early stages of preliminary gunnery. The purpose of this gunnery is to reinforce the skills soldiers need to lay on targets, determine their range, and track them during limited visibility. This training can be done either in garrison or at a local training area.

We obtained a sheet of the no-power thermal tape from our range control office (a 24-inch square is enough to train an entire company). The tape is easy to work with. It sticks securely to the vehicle silhouette and offers a realistic uniform target reflecting thermal variation that provides the vehicle image.

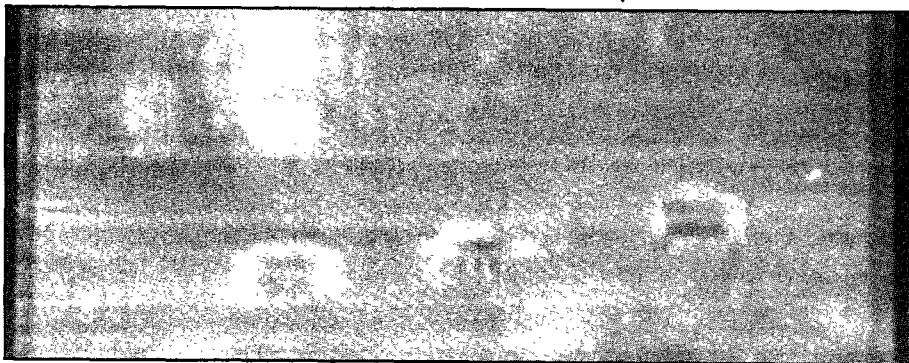
A scaled target range can be established to improve gunnery skills during HSG training. The use of the no-power thermal tape improves Bradley Table I (engage stationary targets and prepare and fire from a range card) and Table II (employ direct fire against stationary and moving targets). Although Field Manual 23-1, *Bradley Fighting Vehicle Gunnery*, calls for these tables to be negotiated in the daylight sight mode, it is now possible to improve the HSG training by repeating the tables in the night sight (thermal) mode. In addition to providing an early introduction to thermal engagements, this opportunity also reinforces training on fire commands, engagement techniques, confidence with switches, and gun manipulation.

Leaders must always consider the constraints on time and other resources when planning training. The Bradley HSG technique should therefore make the most of innovative training opportunities whenever feasible. With the use of the no-power thermal tape, it is now possible to achieve a thermal image with scaled targets. This unique material provides an excellent opportunity for innovative approaches to training at home station.

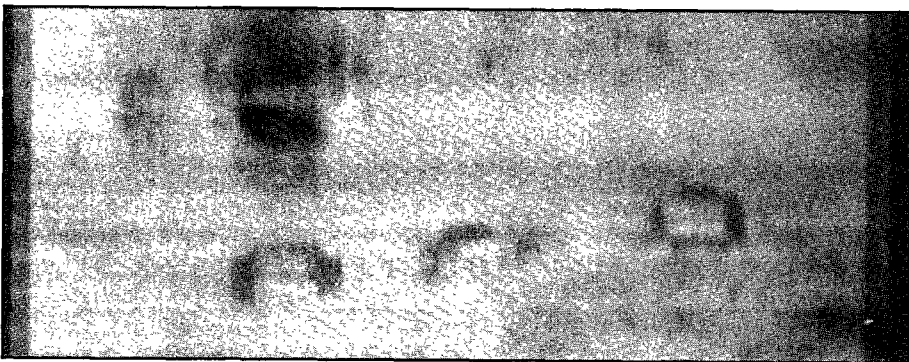
The BFV's thermal target acquisition systems have reduced the enemy's effective use of darkness, a lesson Iraqi tank and fighting vehicle crews learned at great cost during the Gulf War. This nightfighting capability offers a



**Sealed silhouette targets with no-power thermal tape attached (12-inch ruler insert).**



**Targets as seen through the gunner's sight in the "white hot" mode at 25 meters...**



**...and in the "black hot" mode at 25 meters.**

tremendous advantage, but it is one that we must master if we are to fight effectively at night.

Training BFV gunners to use the night sight predominantly is a way to make the most of the thermal advantage. HSG programs that include thermal target engagements are now a solution for training BFV gunners to a higher degree of proficiency when using the night sight. The no-power thermal target material now allows us to train more often the way we will fight—in the thermal mode.

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